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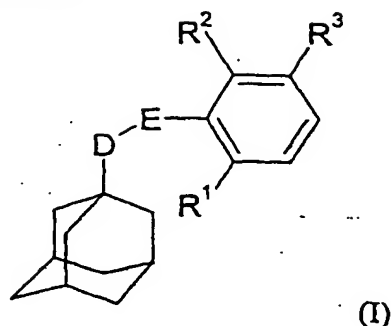
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CLAIMS

1. A compound of general formula

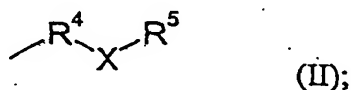


wherein D represents CH_2 or CH_2CH_2 ;

E represents C(O)NH or NHC(O) ;

R^1 and R^2 each independently represent hydrogen, halogen, amino, nitro, $\text{C}_1\text{-C}_6$ alkyl or trifluoromethyl, but R^1 and R^2 may not both simultaneously represent hydrogen;

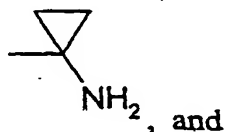
R^3 represents a group of formula



R^4 represents a $\text{C}_1\text{-C}_6$ alkyl group;

X represents an oxygen or sulphur atom or a group NR^{13} , SO or SO_2 ;

R^5 represents hydrogen, or R^5 represents $\text{C}_1\text{-C}_6$ alkyl or $\text{C}_2\text{-C}_6$ alkenyl, each of which may be optionally substituted by at least one substituent selected from halogen, hydroxyl, (di)- $\text{C}_1\text{-C}_6$ -alkylamino, $-\text{Y-R}^6$,



a 5- or 6-membered heteroaromatic ring comprising from 1 to 4 heteroatoms independently selected from nitrogen, oxygen and sulphur which heteroaromatic ring may itself be optionally substituted by at least one substituent selected from halogen, hydroxyl and $\text{C}_1\text{-C}_6$ alkyl;

Y represents an oxygen or sulphur atom or a group NH, SO or SO_2 ;

R^6 represents a group $-R^7Z$ where R^7 represents a C_2-C_6 alkyl group and Z represents an $-OH$, $-CO_2H$, $-NR^8R^9$, $-C(O)NR^{10}R^{11}$ or $-N(R^{12})C(O)-C_1-C_6$ alkyl group, and, in the case where Y represents an oxygen or sulphur atom or a group NH , R^6 additionally represents hydrogen, C_1-C_6 alkyl, C_1-C_6 alkylcarbonyl, C_1-C_6 alkoxy carbonyl, $-C(O)NR^{14}R^{15}$, $-CH_2OC(O)R^{16}$, $-CH_2OC(O)OR^{17}$ or $-C(O)OCH_2OR^{18}$; R^8 , R^9 , R^{10} , R^{11} and R^{12} each independently represent a hydrogen atom or a C_1-C_6 alkyl group; R^{13} represents hydrogen, C_3-C_8 cycloalkyl, C_3-C_8 cycloalkylmethyl, or R^{13} represents a C_1-C_6 alkyl group optionally substituted by at least one substituent selected from hydroxyl and C_1-C_6 alkoxy; and R^{14} , R^{15} , R^{16} , R^{17} and R^{18} each independently represent a C_1-C_6 alkyl group; with the proviso that when E is $C(O)NH$, X is O , NH or $N(C_1-C_6 \text{ alkyl})$, then R^5 is other than a hydrogen atom or an unsubstituted C_1-C_6 alkyl group; or a pharmaceutically acceptable salt or solvate thereof.

2. A compound according to claim 1, wherein D represents CH_2 .

3. A compound according to claim 1 or claim 2, wherein E represents $NHC(O)$.

4. A compound according to any one of claims 1 to 3, wherein R^1 and R^2 each independently represent a hydrogen, chlorine or bromine atom, or an amino, nitro, C_1-C_3 alkyl or trifluoromethyl group.

5. A compound according to any one of the preceding claims, wherein X represents an oxygen atom or a group NR^{13} .

6. A compound according to claim 5, wherein R^{13} represents hydrogen, $-(CH_2)_2OH$, methyl, ethyl, n-propyl, isopropyl, n-butyl, n-pentyl, n-hexyl, cyclopropyl, cyclopentyl, cyclohexyl or cyclohexylmethyl.

7. A compound according to any one of the preceding claims, wherein R^5 represents a C_1 - C_6 alkyl group substituted by a single substituent $-Y-R^6$.

8. A compound according to any one of the preceding claims, wherein Y represents an oxygen or sulphur atom or a group NH.

9. A compound according to claim 8, wherein R^6 represents $-(CH_2)_2OH$, $-(CH_2)_3OH$, hydrogen, methyl, isopropyl, methylcarbonyl or t-butylcarbonyl.

10. A compound of formula (I), or a pharmaceutically acceptable salt or solvate thereof, according to claim 1 which is selected from:

2-Chloro-5-[[2-(2-hydroxy-ethylamino)-ethylamino]-methyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide dihydrochloride,

2-Chloro-5-[[2-(2-hydroxyethoxy)ethylamino]methyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

2-Chloro-5-[(3-hydroxy-2,2-dimethylpropylamino)methyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

2-Chloro-5-[(5-hydroxypentylamino)methyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

2-Chloro-5-[[2-[(2-hydroxyethylthio)ethylamino]methyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

2-Chloro-5-[3-[(2-hydroxyethyl)amino]propyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide, acetate salt,

2-Chloro-5-[3-[(3-hydroxypropyl)amino]propyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide, hydrochloride salt,

2-Chloro-5-[3-(methylamino)propyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide, acetate salt,

2-Chloro-5-[3-[(1-methylethyl)amino]propyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide, hydrochloride salt,

5-[3-[(2-Amino-2-methylpropyl)amino]propyl]-2-chloro-*N*-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide, dihydrochloride salt,

2-Chloro-5-[3-[(4-hydroxybutyl)amino]propyl]-*N*-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

5 2-Chloro-5-[3-[(2-hydroxy-2-methylpropyl)amino]propyl]-*N*-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide, acetate salt,

2-Chloro-5-[3-[[2-(methylamino)ethyl]amino]propyl]-*N*-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide, dihydrochloride salt,

10 (S)-2-Chloro-5-[3-[(2-hydroxypropyl)amino]propyl]-*N*-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide, hydrochloride salt,

(R)-2-Chloro-5-[3-[(2-hydroxypropyl)amino]propyl]-*N*-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide, hydrochloride salt,

(R)-2-Chloro-5-[3-[(2-hydroxy-1-methylethyl)amino]propyl]-*N*-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide, hydrochloride salt,

15 2-Chloro-5-[3-[[2-hydroxy-1-(hydroxymethyl)-1-methylethyl]amino]propyl]-*N*-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

5-[3-[[2-(Acetylamino)ethyl]amino]propyl]-2-chloro-*N*-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide, hydrochloride salt,

20 2-Chloro-5-[3-[[2-(diethylamino)ethyl]amino]propyl]-*N*-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide, dihydrochloride salt,

2-Chloro-5-[3-[(3-methoxypropyl)amino]propyl]-*N*-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide, hydrochloride salt,

2-Chloro-5-[3-[(3-hydroxy-3-methylbutyl)amino]propyl]-*N*-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide, hydrochloride salt,

25 2-Chloro-5-[3-[(2-methoxyethyl)amino]propyl]-*N*-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide, hydrochloride salt,

2-Chloro-5-[3-[(methylamino)propoxy]methyl]-*N*-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl) benzamide,

30 2-Chloro-5-[[2-[(2-hydroxyethyl)amino]ethoxy]methyl]-*N*-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide, acetic acid salt,

2-Chloro-5-[[2-[(3-hydroxypropyl)amino]ethoxy]methyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide, acetic acid salt,

2-Chloro-5-[[[3-[(1-methylethyl)amino]propyl]amino]methyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

5 5-[[[(3-Aminopropyl)amino]methyl]-2-chloro-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

2-Chloro-5-[[[2-[(1-methylethyl)amino]ethyl]amino]methyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

3-[[[3-[4-Chloro-3-[[[(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)amino]-carbonyl]phenyl]propyl]amino]propanoic acid, 2,2-dimethylpropyl ester, trifluoroacetic acid salt,

5-(2-Aminoethyl)-2-chloro-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)benzamide,

2-Chloro-5-[3-[(2-hydroxyethyl)pentylamino]propyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

15 2-Chloro-5-[3-(methyl-2-propenylamino)propyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

2-Chloro-5-[3-[[2-(dimethylamino)ethyl]methylamino]propyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

5-[3-(Butylethylamino)propyl]-2-chloro-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

2-Chloro-5-[3-(methylpentylamino)propyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

2-Chloro-5-[3-[[2-(diethylamino)ethyl]ethylamino]propyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

25 2-Chloro-5-[3-[(2-hydroxyethyl)methylamino]propyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

2-Chloro-5-[3-(dipropylamino)propyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

2-Chloro-5-[3-[(2-hydroxyethyl)(1-methylethyl)amino]propyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

5-[3-[Butyl(2-hydroxyethyl)amino]propyl]-2-chloro-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

2-Chloro-5-[3-(diethylamino)propyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

5 2-Chloro-5-[3-(dimethylamino)propyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

5-[3-(Butylmethylamino)propyl]-2-chloro-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

10 2-Chloro-5-[3-[(2-hydroxyethyl)propylamino]propyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

2-Chloro-5-[3-[ethyl(2-hydroxyethyl)amino]propyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

2-Chloro-5-[3-(dibutylamino)propyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

15 2-Chloro-5-[3-(ethylpropylamino)propyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

2-Chloro-5-[3-[methyl(1-methylethyl)amino]propyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

20 2-Chloro-5-[3-[[3-(dimethylamino)propyl]methylamino]propyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

2-Chloro-5-[3-[cyclohexyl(2-hydroxyethyl)amino]propyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

2-Chloro-5-[3-(cyclohexylmethylamino)propyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

25 2-Chloro-5-[3-(cyclohexylamino)propyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

2-Chloro-5-[3-[[1-(hydroxymethyl)-2,2-dimethylpropyl]amino]propyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

30 2-Chloro-5-[3-(cyclopropylamino)propyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

2-Chloro-5-[3-[[2-(dimethylamino)ethyl]amino]propyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

2-Chloro-5-[3-[(3-hydroxy-2,2-dimethylpropyl)amino]propyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

5 2-Chloro-5-[3-[(1,1-dimethylethyl)amino]propyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

2-Chloro-5-[3-[[3-(dimethylamino)propyl]amino]propyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

10 2-Chloro-5-[3-(cyclopentylamino)propyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

2-Chloro-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-5-[3-[(1,2,2-trimethylpropyl)amino]propyl]-benzamide,

5-[3-(Butylamino)propyl]-2-chloro-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

15 2-Chloro-5-[3-[[1-(hydroxymethyl)-2-methylpropyl]amino]propyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

2-Chloro-5-[3-[(1-methylpropyl)amino]propyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

2-Chloro-5-[3-[[2-(methylthio)ethyl]amino]propyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

20 2-Chloro-5-[3-[(2-hydroxy-1,1-dimethylethyl)amino]propyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

2-Chloro-5-[3-[(cyclohexylmethyl)amino]propyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

25 2-Chloro-5-[3-(2-propenylamino)propyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

2-Chloro-5-[3-[(2-fluoroethyl)amino]propyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

2-Chloro-5-[3-[(2-methoxy-1-methylethyl)amino]propyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

2-Chloro-5-[3-[3-(methylamino)propoxy]propyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)benzamide, dihydrochloride salt,

5-[[[(1-Aminocyclopropyl)methyl](2-hydroxyethyl)amino]methyl]-2-chloro-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

5-[[[(2-Hydroxyethyl)[2-(methylamino)ethyl]amino]methyl]-2-methyl-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)-benzamide,

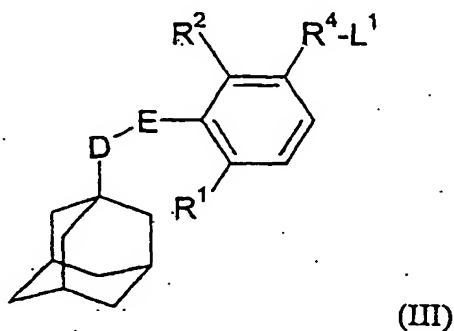
2-Chloro-5-[3-[[2-(1-methyl-1H-imidazol-4-yl)ethyl]amino]propyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)benzamide,

2-Chloro-5-[3-[[2-(1H-imidazol-4-yl)ethyl]amino]propyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)benzamide, and

2-Chloro-5-[3-[[3-(1H-imidazol-1-yl)propyl]amino]propyl]-N-(tricyclo[3.3.1.1^{3,7}]dec-1-ylmethyl)benzamide.

11. A process for the preparation of a compound of formula (I) as defined in claim 1 which comprises:

(a) when X represents an oxygen or sulphur atom or a group NR¹³, reacting a compound of general formula



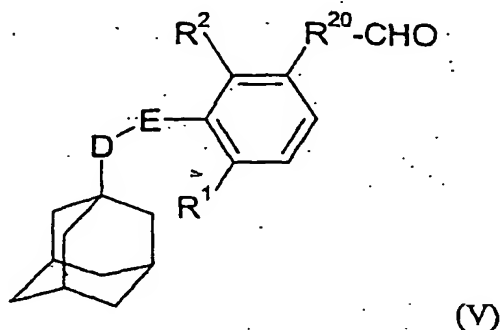
wherein L¹ represents a leaving group and D, E, R¹, R² and R⁴ are as defined in formula (I), with a compound of general formula



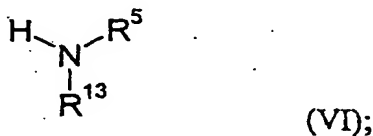
wherein X' represents an oxygen or sulphur atom or a group NR^{13} , and R^5 is as defined in formula (I), optionally in the presence of a suitable silver salt; or

(b) when X represents SO or SO_2 , reacting a corresponding compound of formula (I) in which X represents a sulphur atom with a suitable oxidising agent; or

(c) when X represents a group NR^{13} , reacting a compound of general formula



wherein R^{20} represents a bond or C_1 - C_5 alkyl group and D, E, R^1 and R^2 are as defined in formula (I), with a compound of general formula



wherein R^5 and R^{13} are as defined in formula (I), in the presence of a reducing agent;

and optionally after (a), (b) or (c) converting the compound of formula (I) obtained to a pharmaceutically acceptable salt or solvate thereof.

12. A pharmaceutical composition comprising a compound of formula (I), or a pharmaceutically acceptable salt or solvate thereof, as claimed in any one of claims 1 to 10 in association with a pharmaceutically acceptable adjuvant, diluent or carrier.

13. A process for the preparation of a pharmaceutical composition as claimed in claim 12 which comprises mixing a compound of formula (I), or a pharmaceutically acceptable salt or solvate thereof, as defined in any one of claims 1 to 10 with a pharmaceutically acceptable adjuvant, diluent or carrier.
14. A compound of formula (I), or a pharmaceutically acceptable salt or solvate thereof, as claimed in any one of claims 1 to 10 for use in therapy.
15. A compound of formula (I), or a pharmaceutically acceptable salt or solvate thereof, as claimed in any one of claims 1 to 10 for use in the treatment of rheumatoid arthritis.
16. A compound of formula (I), or a pharmaceutically acceptable salt or solvate thereof, as claimed in any one of claims 1 to 10 for use in the treatment of chronic obstructive pulmonary disease.
17. Use of a compound of formula (I), or a pharmaceutically acceptable salt or solvate thereof, as claimed in any one of claims 1 to 10 in the manufacture of a medicament for use in therapy.
18. Use of a compound of formula (I), or a pharmaceutically acceptable salt or solvate thereof, as claimed in any one of claims 1 to 10 in the manufacture of a medicament for use in treating rheumatoid arthritis.
19. Use of a compound of formula (I), or a pharmaceutically acceptable salt or solvate thereof, as claimed in any one of claims 1 to 10 in the manufacture of a medicament for use in treating chronic obstructive pulmonary disease.
20. A method of effecting immunosuppression which comprises administering a therapeutically effective amount of a compound of formula (I), or a pharmaceutically

acceptable salt or solvate thereof, as claimed in any one of claims 1 to 10 to a patient in need thereof.

21. A method of treating rheumatoid arthritis which comprises administering a
5 therapeutically effective amount of a compound of formula (I), or a pharmaceutically acceptable salt or solvate thereof, as claimed in any one of claims 1 to 10 to a patient in need thereof.

22. A method of treating chronic obstructive pulmonary disease which comprises
10 administering a therapeutically effective amount of a compound of formula (I), or a pharmaceutically acceptable salt or solvate thereof, as claimed in any one of claims 1 to 10 to a patient in need thereof.